

# NEO S Introduction

NEO S is an all-in-one HiFi solution, which solves complicated device matching and connection problem and combines 4K UHD media player, music streaming media player, audio and video media center, high-fidelity headphone amplifier, music decoder and Bluetooth decoder.

As a 4K UHD media player, it can decode and output advanced 4K 12Bit HDR10+/Dolby vision.

NEO S can play music from a variety of input sources, such as internal SSD, hard drive, computer and NAS server. Almost all high-sampling master-tape music files can be played such as MQA, SACD ISO, DFF, DSF, FLAC, WAV, APE etc., and it can manage local music resources and music streaming.

Music streaming application,DLNA streaming are supported.

NEO S can be used as an independent high-fidelity audio decoder with two ES9068 DAC chips, lossless Bluetooth, Optical, Coaxial, AES/EBU and asynchronous USB audio input, XLR balanced, RCA two-channel preamp output and high-performance amp output. Excellent audio index for both local files and external files can be obtained by the decoding of DAC, fully balanced operational amplifier circuit and HiFi components. Up to 22.5792 MHz sampling DSD files (DSD512 Native mode) and 768 kHz 32 bit PCM lossless master files.

NEO S can be controlled easily by Zidoo Controller APP. The large 5-inch OLED HD display screen intuitively shows up general settings, music library data, playback status and input source sampling rate etc. It is very convenient to operate by touch screen, physical volume knob and multifunctional control knob.

# Specification

Chassis	Aviation aluminum alloy
Display	5-inch OLED HD touch screen
CPU	Realtek RTD1619DR ARM Cortex-A55(hexa-core)
GPU	ARM Mali-G51 MP3
Internal Storage	2GB DDR4 (RAM)+16GB eMMC
Internal SSD	256G SSD hard drive
DAC	ES 9068*2
Wi-Fi	2.4G+5G dual band WiFi, 802.11 a/b/g/n/AC 2T2R MIMO 867Mbps
Ethernet	1*RJ-45(10/100/1000Mbps)
HDMI Output	2.0a (4K@60fps/12Bit/HDR/BT2020/YCbCr 4:4:4 output)/ audio passthrough
Video Decoding	4K@60p HEVC/H.265 12Bit HDR10, HDR10+, Dolby Vision
Audio Decoding	Support true-hd HD audio passthrough, stereo PCM decoding. Built-in DAC audio decoding: support up to stereo DSD512 24Bit, PCM 768KHz 32Bit, MQA
Bluetooth Audio Input	CSR8675 flagship Bluetooth audio module supports mainstream lossless audio protocols such as SBC/AAC
USB Audio Input	USB audio compatible system: Windows(7,10), Mac, Android Support up to stereo DSD512, PCM 768KHz 32Bit, MQA
Digital Audio Input	USB DAC IN, AES/EBU input, Coaxial input, Optical Input
Digital Audio Output	Coaxial output, HDMI output, USB Audio output, Bluetooth output
Analog Audio Output	Preamp output: XLR(balanced), RCA; Headphone amplifier output: 4.4mm balanced, 6.3mm single end.
Headphone Impedance	16-300Ω (low-gain mode: 16-32Ω/ high-gain mode: 32-300Ω)
USB Ports	USB3.0*2, USB2.0*2
Control Ports	IR, Bluetooth, TCP/IP (WOL)
Power Supply	AC 110-240V 50/60Hz
Dimensions	213mm*292mm*101mm
Packing List	Remote control*1, Antennas*3, Product manual*1

# Specification

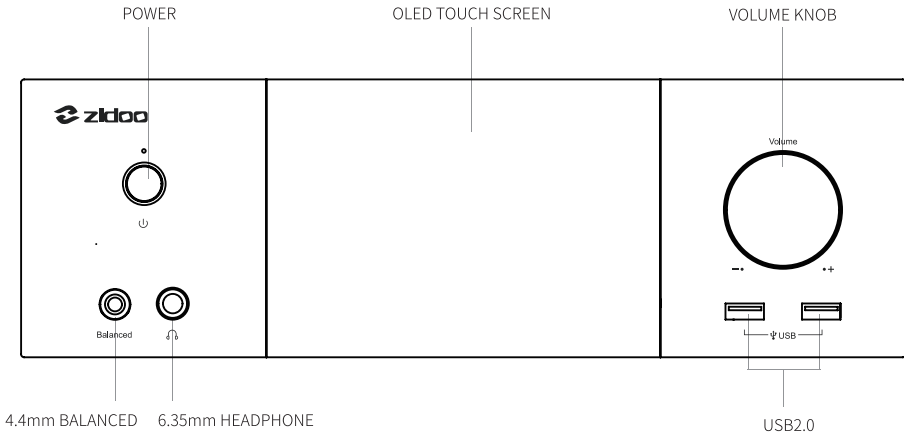
<p>Analog Audio Characteristics</p>	<p><b>XLR(balanced) Output</b></p> <p>Output Level(Vrms): 4.1 Vrms            THD+N: -118dB            Noise: 2uVrms            SNR: 120dB(20Hz-20kHz)            Frequency Response: <math>\pm 0.25</math>dB(20Hz-20kHz)            Crosstalk:-120dB(1kHz,Fs=44.1kHz)            DNR:119dB</p>
	<p><b>RCA Output</b></p> <p>Output Level(Vrms): 2.16 Vrms            THD+N:-116dB            Noise: 2.5uVrms            SNR: 119dB(20Hz-20kHz)            Frequency Response: <math>\pm 0.258</math>dB(20Hz-20kHz)            Crosstalk: -130dB(1kHz,Fs=44.1kHz)            DNR: 118dB</p>
	<p><b>Headphone 4.4mm Balanced Output</b></p> <p><b>Low-gain mode</b></p> <p>Output Level(Vrms): 2.26Vrms            Output Power: 310mW/32<math>\Omega</math>            THD+N: -116dB            Noise: 1.7uVrms            SNR: 118dB(20Hz-20kHz)            Frequency Response: <math>\pm 0.25</math>dB(20Hz-20kHz)            Crosstalk: -128dB(1kHz,Fs=44.1kHz)            DNR: 118dB</p> <p><b>High-gain mode</b></p> <p>Output Level(Vrms): 4.1Vrms            Output Power: 110mW/300<math>\Omega</math>            THD+N: -118dB            Noise: 3.5uVrms            SNR: 120dB(20Hz-20kHz)            Frequency Response: <math>\pm 0.25</math>dB(20Hz-20kHz)            Crosstalk: -130dB(1kHz,Fs=44.1kHz)            DNR: 119dB</p>

# Specification

Analog Audio Characteristics	<p><b>Headphone 6.35mm Single End Output</b></p> <p><b>Low-gain mode</b> Output Level(Vrms): 1.5Vrms Output Power: 138mW/32Ω THD+N: -114dB Noise: 3.2uVrms SNR: 116dB(20Hz-20kHz) Frequency Response: <math>\pm 0.25</math>dB(20Hz-20kHz) Crosstalk: -128dB(1kHz,Fs=44.1kHz) DNR: 115dB</p> <p><b>High-gain mode</b> Output Level(Vrms): 2.7Vrms Output Power: 47mW/300Ω THD+N:-114dB Noise: 3.5uVrms SNR: 118dB(20Hz-20kHz) Frequency Response: <math>\pm 0.25</math>dB(20Hz-20kHz) Crosstalk: -132dB(1kHz,Fs=44.1kHz) DNR: 118dB</p>
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# Hardware Introduction

## 1. Front



### ① Touch screen

Most operation can be done by touch screen.

### ② Power

Turn on/off the device.

### ③ Volume knob

Rotate clockwise to increase volume while counterclockwise to decrease volume.

\*Under the DAC IN mode, volume can be adjusted with step 0.5db~3db in DAC setting.

### ④ Remote control

Bluetooth infrared remote control is equipped for NEO S, it is suggested to follow the boot wizard to finish Bluetooth pairing before use.

# 4K UHD Hi-end Media player

You can choose to control the large screen or small screen by remote. It is automatic mode by default.

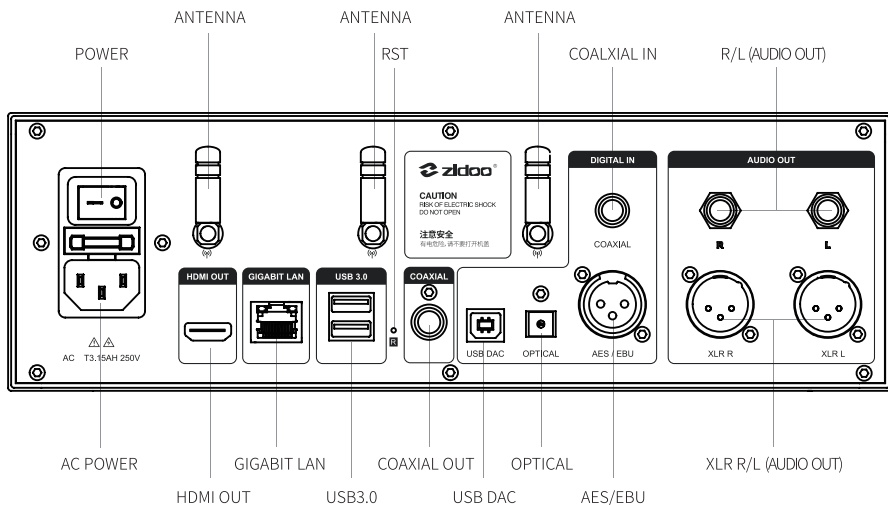
There are three modes on touch screen "**Setting — General setting — The remote control acts on**".

Auto mode: the remote will control the touch screen (small screen) when display device are not connected, otherwise it will control display device (large screen).

Front display: only control touch screen (small screen).

External display device: only control display device (large screen).

## 2.Back



Note:

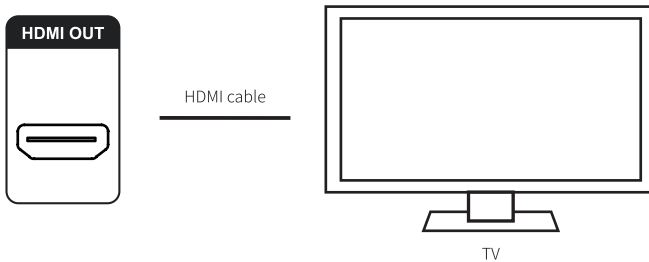
Please install antennas before using.

# Connection and Installation

## 1. HDMI Device Connection

### ① Connect with TV

Make sure both TV and NEO S are power-off, connect these two devices by HDMI cable from NEO S HDMI OUT port to TV HDMI IN port. And choose the correct signal source on TV after powering on.



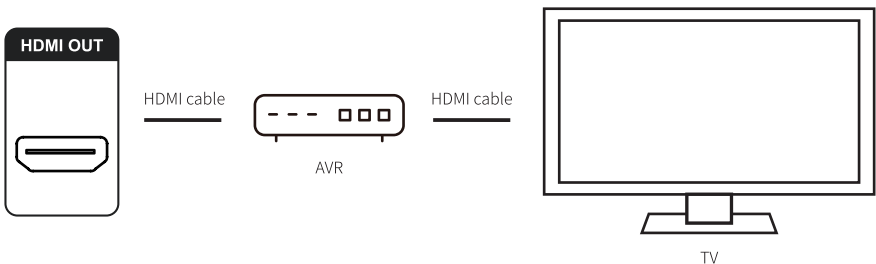
Note:

\*Please use HDMI 2.0 or higher-specification cable and display device to enjoy 4K UHD HDR experience.

\*The small screen will be turned off when playing movie to ensure better movie viewing experience.

### ② Connect with TV and AVR

Make sure AVR, TV, and NEO S are all power-off. Two HDMI cables are required in this process, one cable connect from NEO S HDMI OUT port to AVR HDMI IN port, another cable connect from AVR HDMI OUT port to TV HDMI IN port. Choose the correct signal source on AVR and TV respectively after powering on.



Note:

\* In order to get wonderful 4K UHD HDR experience, please ensure that HDMI cable, display device and AVR all can meet the corresponding technical specifications.

\* HDMI OUT and DAC analog cannot output at the same time. It is needed to turn off DAC to output audio from HDMI:

**Settings > DAC Audio > Source In > Digital Output (Turn Off DAC).**

\* HDMI audio passthrough is supported by NEO S, if AVR supports more advanced audio formats, please set HDMI output mode to RAW:

**Settings > Audio > HDMI Audio > RAW.**

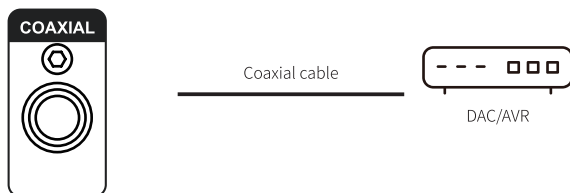
## 2.Audio Output Connection and Installation

Digital audio output includes HDMI, Optical, Coaxial, USB and Bluetooth audio output. Please select the audio source as "Digital Output", meanwhile the DAC audio will be turned off.

### ① Digital Output

#### ① Connect DAC or AVR by Coaxial

Connect the device with AVR by coaxial audio cable, switch to corresponding signal source on DAC or AVR.



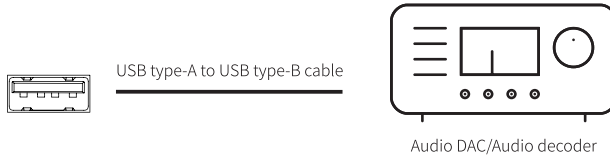
Note:

Coaxial output supports up to 5.1 output



## ② Connect DAC by USB Audio Output

Connect NEO S USB Type-A port with DAC USB DAC IN port by USB audio cable.



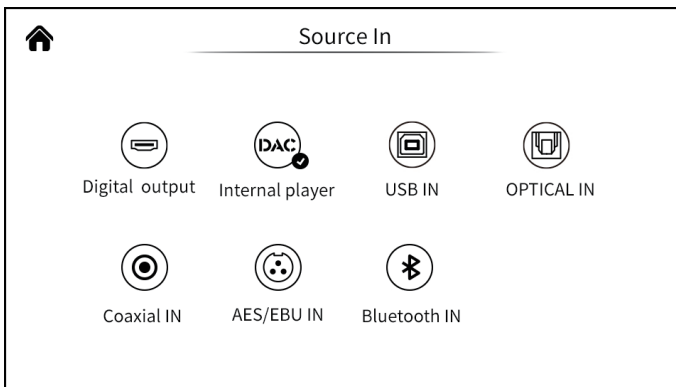
Note:

\* Corresponding setting: **Settings > Audio > USB Audio**

\* Please contact with Zidoo tech support if you meet incompatible situation when connecting USB audio output to some DAC

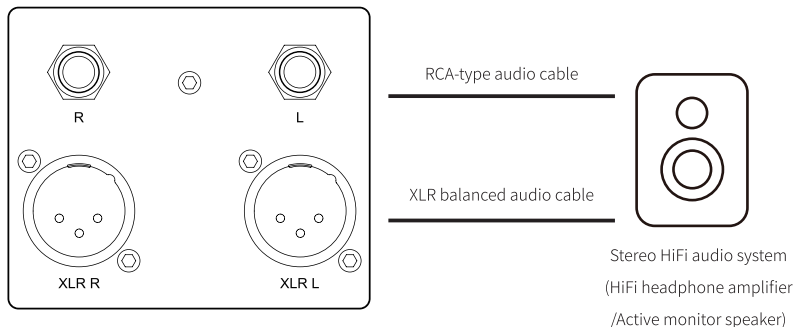
## ② Analog Output

Analog audio output includes RCA, XLR and headphone jacks, all of them are decoded and output by the ES 9068 DAC. When playing from internal player, it's needed to turn on "Source In> DAC(internal player)". When playing from external player, please switch to relevant sources. The digital output will be closed when outputting from analog output.



## ① RCA, XLR output

Connect NEO S with active speaker or HiFi poweramp by using a pair of RCA or XLR balanced analog audio cables.

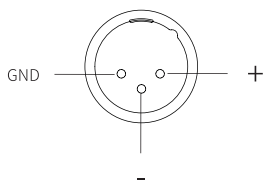


### Note:

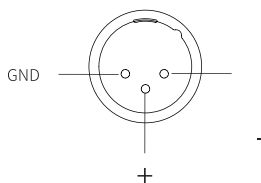
\* NEO S is equipped with two independent stereo output ports: RCA and XLR balanced ports can output audio signals simultaneously. Generally only choosing one of these ports is enough, and it is recommended to choose XLR balanced port to obtain better noise suppression and signal integrity.

\* NEO S balanced output is a three-pin XLR male port, which will output differential signals pair (positive/negative signals). The amplifier circuit can cancel common mode noise and improve the integrity of the original signal by comparing the voltage difference of signals pair.

\* In some audio systems, the positive and negative polarities are reversed. The default positive polarity are shown below. If you need to reverse the polarity, please set it in the system: **Settings > DAC audio > XLR Port Polarity > Reverse**



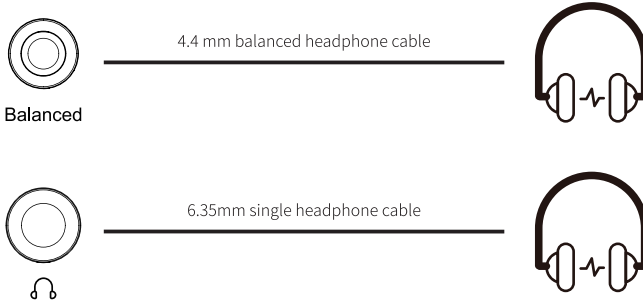
Positive polarity diagram + system positive setting



Negative polarity diagram + system negative setting

## ② Headphone Amplifier Output

There is two headphone ports including 6.35mm and 4.4mm balanced amp output on NEO S front panel. Please connect to corresponding port according to your demand.



### Note:

\* Recommended headphone impedance range for the device is 16-300 $\Omega$  (low-gain mode: 16-32 $\Omega$ / high-gain mode: 32-300 $\Omega$ ).

\* AMP gain mode switching: set through NEO S touch screen,

**Settings > DAC settings > Headset gain > Low gain/High gain**

\* The output priority: 6.35mm headphone output > 4.4mm balanced headphone output > XLR balanced output=RCA output

### 3. Digital Audio Input

#### ① USB Audio Input

NEO S can be connected with PC, USB audio output device and mobile phone by using a USB Type-A to USB Type-B cable.

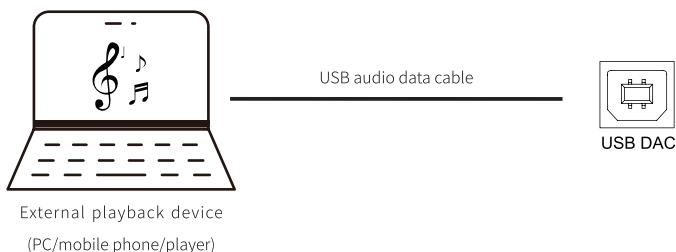
This connection method allows NEO S to be used as a high-performance pure DAC. The digital signal input by the external player has been decoded by ES9068 DAC decoding chip, so that it provides the best audio decoding performance.

\* Corresponding setting

Settings > Source IN >



USB IN



Note:

\* Drivers might be needed to be installed to support PC or external playback device to transmit audio to NEO S. For example, audio driver is needed to be installed for Windows on PC. Please download the driver on official website or contact technicians; No drivers are needed for Mac OS and Android.

\* NEO S USB input supports up to stereo DSD512 24Bit, PCM 768KHz 32Bit and MQA. The actual playback specifications are affected by hardware equipment and software support.

## ② Coaxial/Optical and AES/EBU Audio Input

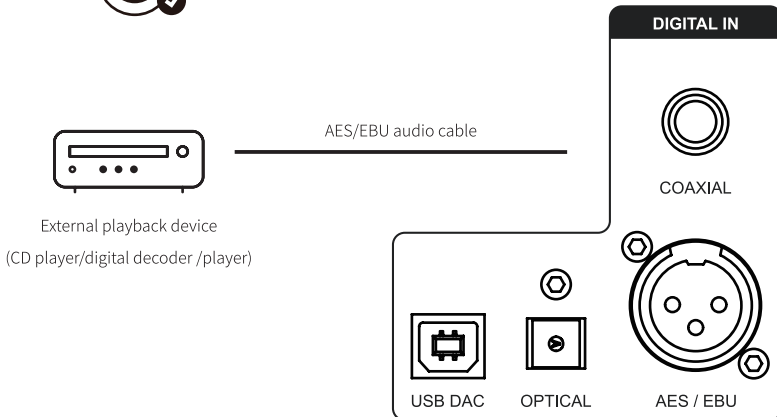
### ① Coaxial Audio Input

A 75 ohm coaxial cable is used to connect coaxial output port of a playback device to the digital coaxial port of NEO S, changing to optical cable if you connect to optical port. Please don't forget to switch audio source input setting to :



### ② AES/EBU Audio Input

A 75 ohm digital XLR audio cable is used to connect the AES/EBU output of a playback device to the AES/EBU balanced digital audio input port of NEO S. And it is needed to switch audio source input setting to:



### ③ Bluetooth Audio Input

The device has built in a CSR8675 flagship Bluetooth audio module, which supports SBC, AAC and other audio protocols. So that it can be used as a Bluetooth decoder to receive lossless Bluetooth audio signals from mobile devices.

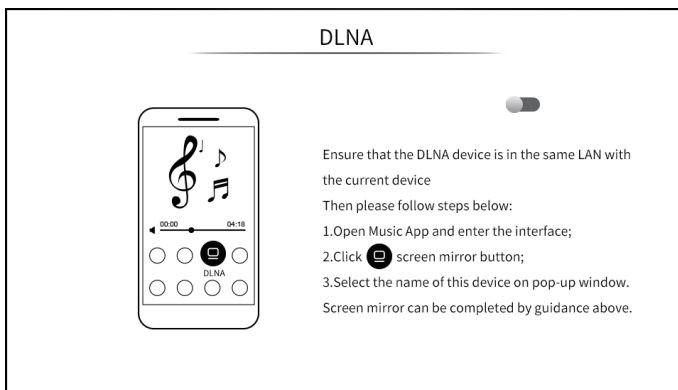


on the device and search Bluetooth device “NEO S” on mobile device to finish pairing.

## 4. Music Streaming

Multiple protocols are supported by NEO S. DLNA can push music from the mobile device to NEO S in the same LAN.

Turn on "Media Center——>DLNA" on NEO S display screen. Access app on mobile device with DLNA support, play music and cast screen to NEO S.



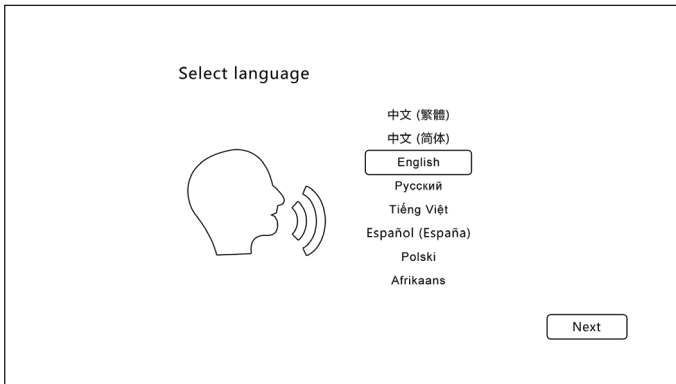
# Boot and Initial Setup Wizard

NEO S will enter into initial setup wizard when it is booted for the first time, which will be displayed on large screen (display device) or small screen (NEO S OLED touch screen). If it is detected that NEO S has connected with display device by HDMI cable, initial setup wizard will show on large screen. Otherwise it will show on small screen. Please follow the system guidance to finish setting.

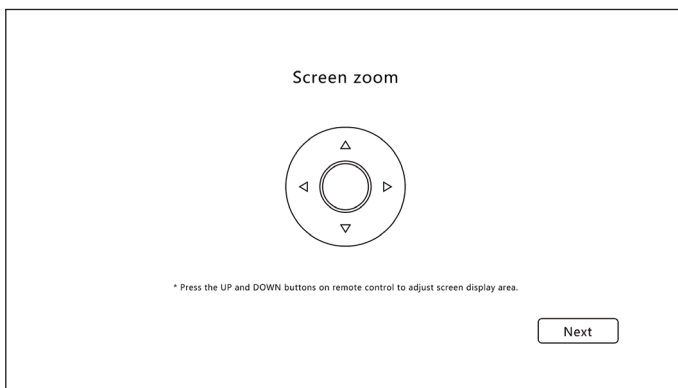
## 1. Initial Setup Wizard on Large Screen

### ① System language selection, screen zoom, time zone setting

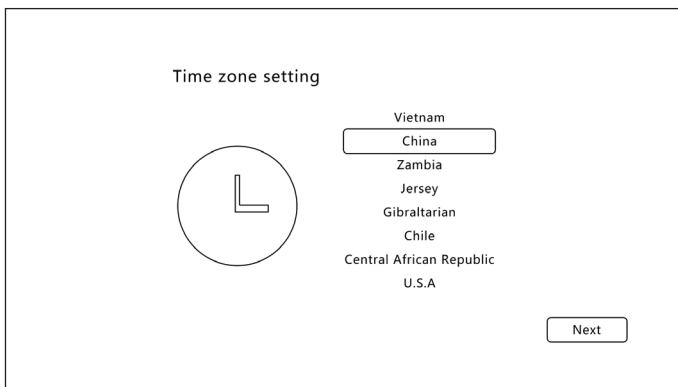
Choose the system language according to your language habit.



Press the UP and DOWN buttons on remote control to adjust screen display area.



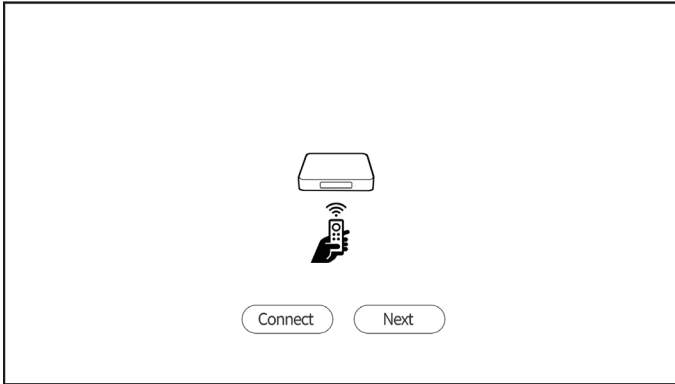
Select the time zone for the system according to your location.





## ② Bluetooth Match-Up

Let remote controller be aligned with media player and press Page-Down KEY and Menu KEY at the same time until indicator light blinking. The light will be off after matching successfully.

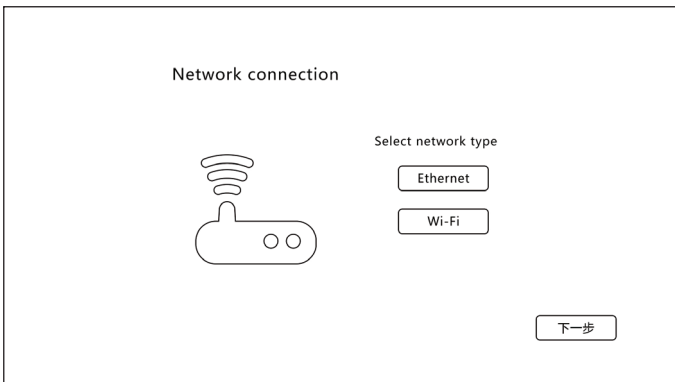


Note:

- \* Make sure Bluetooth antenna is installed.
- \* When large display device like TV connects with NEO S by HDMI cable, only large display screen can be controlled by the remote.

## ③ Network Setting

Configure network to connect device with network quickly.



# 4K UHD Hi-end Media player

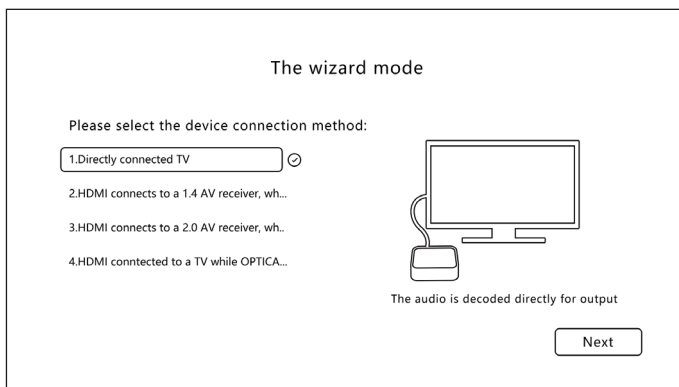
WI-FI: choose network SSID, input password and connect WIFI.

Ethernet: plug in the network cable to connect the network automatically.

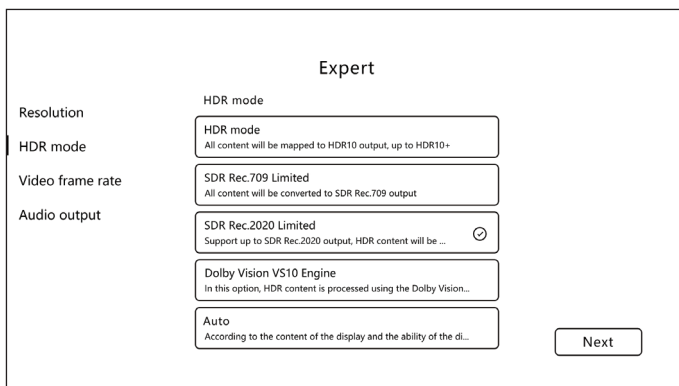
## ④ Select output mode

Please select the corresponding mode according to your needs, then it will finish relevant setting.

Wizard mode: select the corresponding option according to your usage environment and device connection.

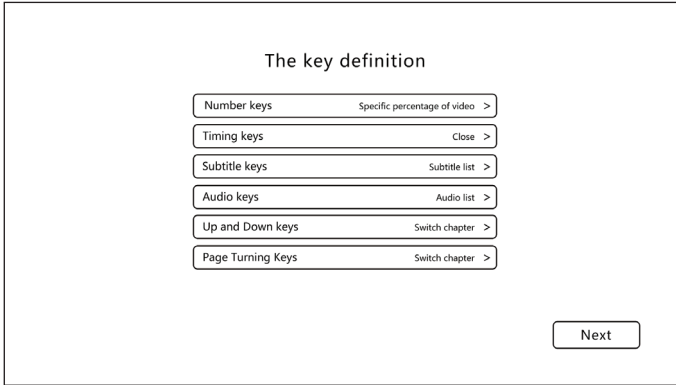


Expert mode: The audio and video output is customized by users, it is recommended for professionals.



### ⑤ The key definition

Define the corresponding functions for number keys, timing key, subtitle key, audio key, up and down keys and page keys on the remote control according to your usage habits.

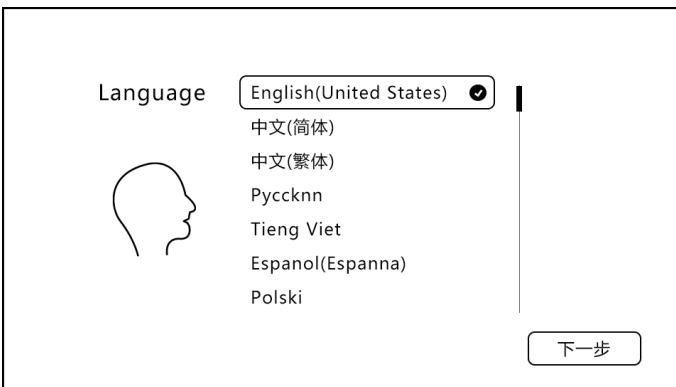


After completing settings above, please follow prompts and click "Next" to finish initial setup. Enjoy Zidoo audio visual feast!

## 2. Initial Setup Wizard on Small Screen

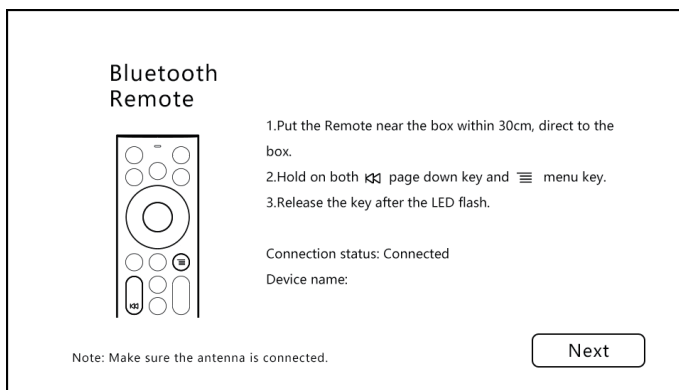
### ① System Language Selection

Select the system language according to your demand.



## ② Bluetooth Match-Up

Let remote controller be aligned with media player and press Page-Down KEY and Menu KEY at the same time until indicator light blinking. The light will be off after matching successfully.



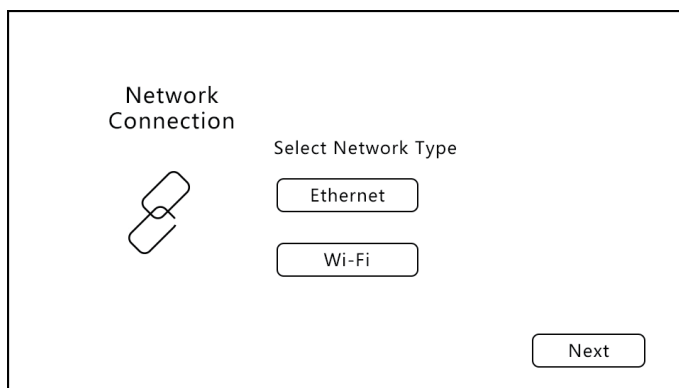
Note:

\* Make sure Bluetooth antenna is installed.

\* When no large display device like TV connects with NEO S, only OLED screen can be controlled by the remote.

## ③ Network Settings

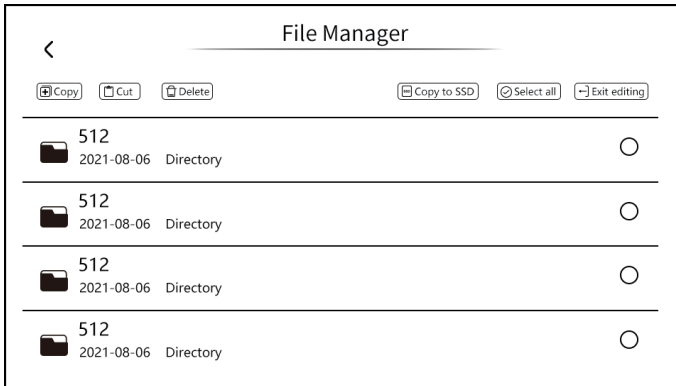
Choose Ethernet or WiFi to connect the device with network quickly.



# File Manager

## 1. File Manager on Small Touch Screen

We can edit files on NEO S touch screen, copy files from external storage devices to internal SSD and copy/paste/cut/delete files in hard drive, USB storage device and network server.



### 1. Copy files from external storage device to internal SSD

Select the file directory in File Manager, choose "**Edit > Select all/one folder/one file**", then click "Copy to SSD".

### 2. Copy files between external storage device

Select the file directory in File Manager, choose "**Edit > Select all/one folder/one file**", click "Copy/Cut" then "Paste" in the targeted device directory.

### 3. Delete files

Select the file directory in File Manager, choose "**Edit > Select all/one folder/one file**", click "Delete" and confirm.

Notes:

\* Files can only be pasted to network storage device with write permission.

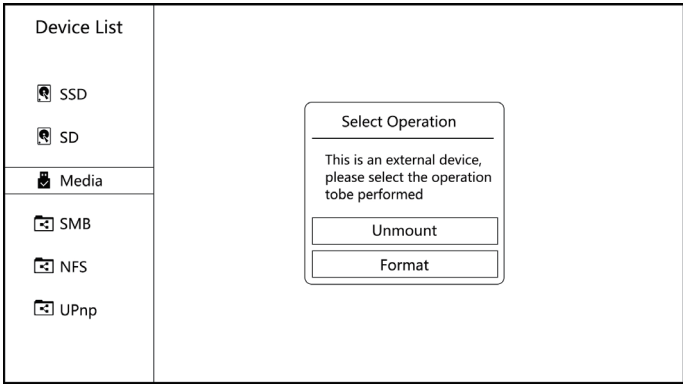
\* Please be careful to delete files, data cannot be recovered once it is deleted.

## 2.File Manager on Large Display Screen

There are more functions in File Manager as follows when operating on large display screen:

### 1. Uninstall and format the hard disk

Press left arrow key in File Manager to choose storage device, then press the key again to uninstall or format hard drive.

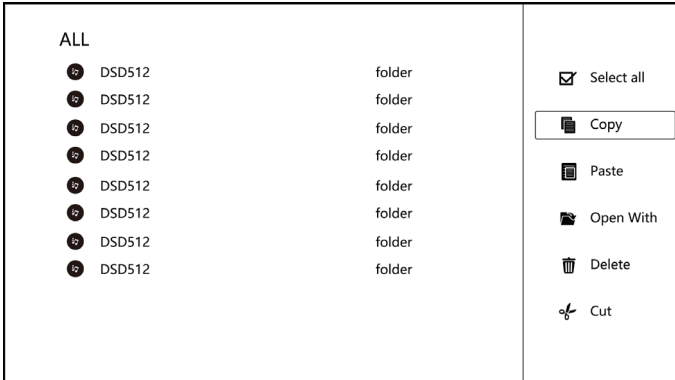


Uninstall: Uninstall the connected USB storage device.

Format: Format the USB storage device. Rename and format selection are supported.

## 2. Relevant file operation

Press "Menu" or "Right arrow" key on large screen to finish operations as below.



Select multiple/select all: select several files needed to be manipulated or edited

Copy: copy the selected file

Paste: paste the copied file

Play mode: select the playback mode, which is applied for third-party playback application

Delete: delete the selected file

Cut: cut the selected file

Favorite: put the selected file into my favorites

Refresh: refresh the current page

Rename: rename the selected file

New: create a new folder or file in the current directory

Viewport: set the view mode of file browsing

Settings: some advanced functions

Notes:

\* Files can only be pasted /renamed /created to network storage device with write permission.

\* Please be careful to delete and format files, data cannot be recovered once it is deleted.

# Music Player

NEO S Music Player can play lossless music from internal SSD, external hard drive and NAS in same LAN. Music files are added across different devices to generate music library, so that music resources can be managed, collected, searched and played more intuitively and conveniently.

## 1.Adding Local Music Files

It is recommended to add files from USB stick, hard drive and network server at a time to Music Player.

### ①. Adding from small touch screen

Turn on the device, make sure network is connected, then access into the Home page > Music library > Folder > Add music directory > Select music stored device(hard drive or NFS/SMB network server) and find the path of music file > Click OK and wait for scanning.

\* Long press the file directory can play, scan and remove file.

### ②. Adding from HDMI display screen

It is similar with operations on small touch screen, adding device and scanning music file for the first time according to the instruction on screen.

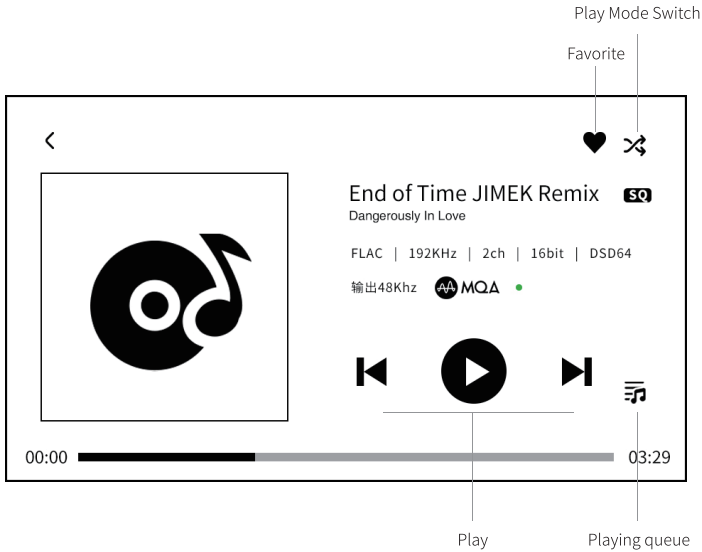
## 2.Music Playback

After adding and scanning music files, music will be displayed in music library in these categories: "Single", "Artist", "Album", and "Folder". Click the playback status icon in the upper right corner to enter into playback page.

## 3.Music Playback and Status Display

1.Music playback page can display album cover, song name, sampling specification, playback progress and control buttons.





### ①. Buttons description

Favorite: add the currently playing song to my favorites.

Control buttons: previous song/next song, pause/play

layback mode switching button: switch modes among list play, shuffle play, list cycle and single cycle.

Playing queue: check music playback order in the queue. For example, when playing songs from the artist category, the playing queue will include all songs in artist category.

### ②. My favorite music

① Add current-playing song to my favorites: click " " to add the current-playing song to my favorites.

② Add songs in categories into my favorites: long press songs in music list of artist, album and folder categories to add into my favorites.

③ Add songs in playing queue into my favorites: click the playing queue in music playback detailed page. click " " in the upper right corner to add all songs in playing queue into my favorites.

### ③. Create and add to playlist

① Create and add single to the playlist:

Long press a single song and select "Add to Playlist" in the pop up box > "Create Playlist" - > Enter the name of the new playlist, then select the single into the new playlist.

② Add to playlist in batch:

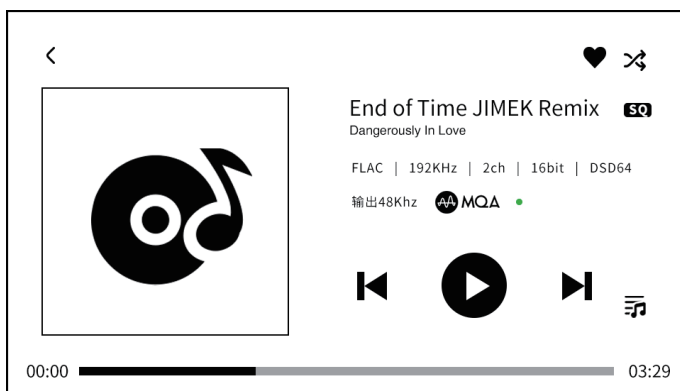
Click the playing queue in the top-right corner of music playback page. Click "add" icon, select all music in playing queue to playlist.

### ④ . MQA (Master Quality Authenticated)

The NEO S includes MQA technology, which enables you to play back MQA audio files and streams, delivering the sound of the original master recording. The NEO S LED glows green or blue to indicate that the unit is decoding and playing an MQA stream or file, and denotes provenance to ensure that the sound is identical to that of the source material. It glows blue to indicate it is playing an MQA Studio file, which has either been approved in the studio by the artist/producer or has been verified by the copyright owner.

● MAQ

● MAQ Studio



# Smart Control

Users can control Zidoo media players by installing Zidoo Controller APP. File manager, applications, music player, poster wall and settings can all be controlled.

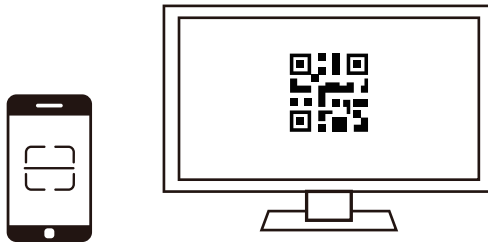
## ① Application Installation

Please find "**All APPs > Control Center**" on display device or "**Settings > Control Center**" on NEO S touch screen, then scan the QR code to download the APP. Zidoo Controller APP can be downloaded on iPhone by searching "Zidoo" in "Apple Store".

## ② Connection

After the APP is installed, please ensure devices are connected with network successfully and mobile device and Zidoo media player in same LAN. Then following steps below to add device:

Open Zidoo Controller APP and click "+" on the right-top corner then scan QR code in Media Center.



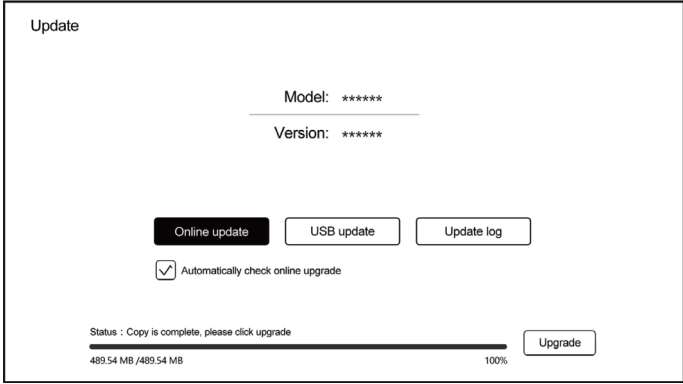
# OTA Update

Zidoo will update firmware from time to time. After new firmware is released, it can be updated through the OTA to experience new functions. NEO S OTA update can be updated through large display screen or small NEO S OLED screen. Both online update and USB update are supported.

## 1.Update on Large Display Screen

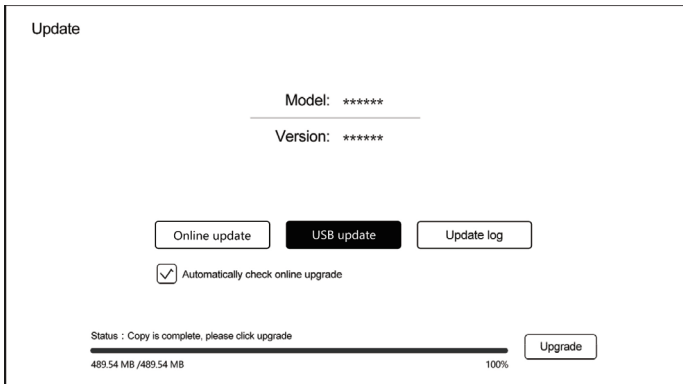
## ① Online Update

Click the "online update" option to obtain the latest firmware information through the network. Follow instructions to update and wait the device to restart automatically after the update is finished.



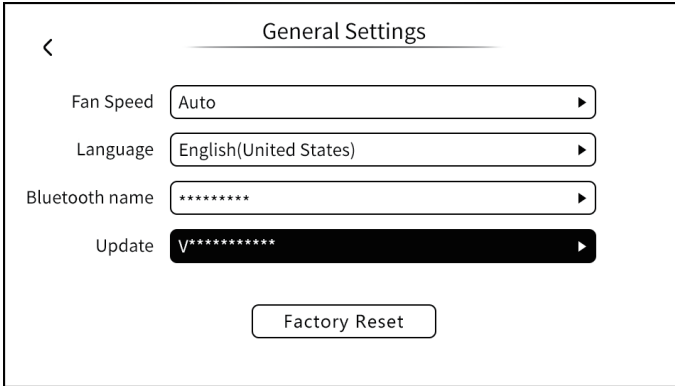
## ② USB Update

Download firmware from official website to a USB stick, insert the USB stick to the device, and then click "USB update" option. Follow instructions to update and wait the device to restart automatically after the update is finished.



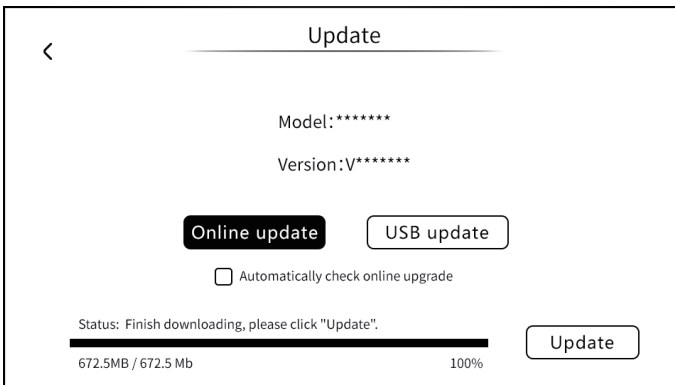
## 2.Update on NEO S OLED Screen

Firstly find "Settings > Generic Setting > Update " on NEO S OLED screen.



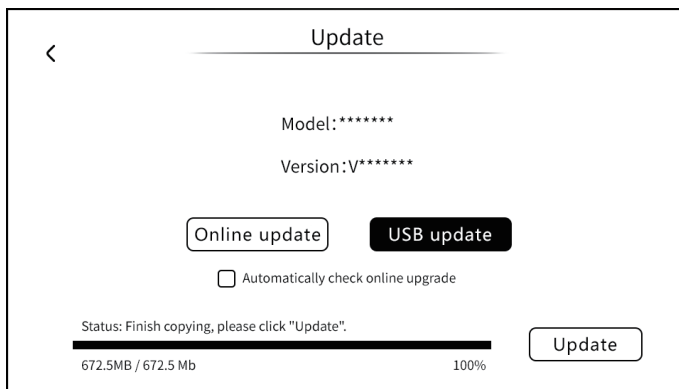
### ① Online Update

Click the "online update" option to obtain the latest firmware information through the network. Follow instructions to update and wait the device to restart automatically after the update is finished.



## ② USB Update

Download firmware from official website to a USB stick, insert the USB stick to the device, and then click "USB update" option. Follow instructions to update and wait the device to restart automatically after the update is finished.



### Special Note:

In order to improve the user experience, Zidoo will update firmware from time to time. Therefore this product manual may differ from the actual setting menus of the product. Please download the latest version of product manual on Zidoo official website.

### Safety Warning:

1. No water splashing or dripping, don't put objects with liquid like vase on the device.
2. The power plug and the power switch are used to disconnect power supply, which cannot be blocked by other objects.
3. It is Class I device, there must be grounding measures inside the box when using.



\* Safe using below 2000m altitude.

# Guarantee

## 保修卡

### User File

#### 用户信息

User name 用户姓名		Sex 性别	
Address 回寄地址			
Telephone 联系电话		Zip 邮编	
Commodity name and specification 产品名称		Model NO. 型号	
Fault description 故障说明			

### Guarantee Item

#### 保修条款

- (1) One year guarantee from date of purchased. (not including fittings)
- (2) All of damage by man-made(tear open the housing,tear off the sticker,unnormally using),or losing this card,we will not guarantee.
- (1) 保修期限：本产品遵循国家三包条例，商品存在非人为损坏所引起的硬件故障，本公司将提供一年保修服务（配件除外）。
- (2) 如需寄回本公司维修，请与此保修卡一同寄回。
- (3) 一切人为因素造成的损坏（包括擅自拆机，撕毁标签，自行刷机等等），本公司将不予保修。



QUALIFIED  
CERTIFICATE  
合格证

CHECKER/检验员 \_\_\_\_\_

DATE/日期 \_\_\_\_\_

